

Article XV.—DESCRIPTION OF A NEW CARIBOU FROM
NORTHERN BRITISH COLUMBIA, AND RE-
MARKS ON *RANGIFER MONTANUS*.

By J. A. ALLEN.

A series of Caribou collected by Mr. Andrew J. Stone for the American Museum in the Cassiar Mountains, northern British Columbia, September 15-26, 1897, were provisionally referred by me to *Rangifer montanus*,¹ described in August, 1899, by Mr. Ernest Seton-Thompson² from a mounted specimen in the Museum of the Canadian Geological Survey, "taken in the Illecillewaet watershed, near Revelstoke, Selkirk Range, B. C., in 1889." A series of four specimens, two fine adult males and two fine adult females, taken September 26, 1901, have just been received by the Museum, collected in the Gold Range Mountains, twenty-five miles southeast of Sicamous, and are thus practically topotypes of *Rangifer montanus*. These specimens show that the Caribou from the Cassiar Mountains is very different from *Rangifer montanus* of the Selkirks. The specimens of the two series having both been taken during the last half of September, they are strictly comparable as regards season.

***Rangifer osborni*, sp. nov.**

Rangifer montanus ALLEN, Bull. Am. Mus. Nat. Hist., XIII, 1900, Art. I., pp. 1-18, figs. 2-6, 11, 15, and 16. Not *Rangifer montanus* Seton-Thompson.

Type, No. 15714, ♂ ad., Cassiar Mountains, British Columbia, Sept., 1897; Andrew J. Stone (James M. Constable Expedition).

The largest of all known Caribou, with very long and very heavy antlers, which have a low and very long backward sweep.

Adult Male, in September.³—General color above clove-brown, darkest on the head, back, thighs, and lower edge of the sides of the chest, and still darker, blackish brown, on the breast and limbs; muzzle, including the whole end of the nose and front border of the lower lip,

¹ This Bulletin, Vol. XIII, 1900, pp. 1-18, April 3, 1900.

² 'Preliminary Description of a New Caribou,' The Ottawa Naturalist, XIII, August, 1899, pp. 129, 130.

³ The following description and measurements are from my former paper (*l. c.*, pp. 5 and 6).

silvery grayish white, succeeded by a broad band of blackish brown, which fades posteriorly on the sides of the head and below into the general color, but extends broadly over the front part of the head to



Fig. 1. *Rangifer osborni*, ♂ ad., No. 15714, Cassiar Mts., B. C.; A. J. Stone. $\frac{1}{9}$ nat. size.

the eyes; neck all round brownish gray, lighter on the sides than above, becoming nearly white in front; the gray color of the sides of the neck extends posteriorly over the anterior part of the shoulders, and is continued as an ill-defined broad band on the sides of the chest; ventral surface, from the chest posteriorly, grayish white, passing into pure white posteriorly and on the inside of the thighs; rump patch white, large and sharply defined; tail above centrally dark brown like the back, broadly edged and tipped with white; a narrow band of pure white borders the hoofs; ears externally dark brown, mixed with gray and edged with blackish; internally much lighter, becoming light gray at the inner base. In one specimen there is a broad band of whitish



Fig. 2. *Rangifer osborni*, ♂ ad., Cassiar Mts., B. C.; Coll. A. J. Stone. $\frac{1}{2}$ nat. size.

gray above and below the eye, forming an imperfect eyering; but this seems exceptional, and is probably a remnant of the summer coat, the majority of the specimens having the eye region dark like the adjoining parts of the face.

Female and Young-of-the-year.—The female does not appear to differ materially from the male. The young-of-the-year, however, is much lighter than the adult, having the whole ventral area white, and the whole neck and the sides much lighter; the dark color of the upper parts is lighter and restricted in area to the middle of the back from the shoulders posteriorly; the tail is all white except at the base above.

Measurements.—The following are the collector's measurements taken from the freshly killed specimens before skinning:

EXTERNAL MEASUREMENTS.

	No. 4 ¹ ♂ ad.	No. 5 ♂ ad.	No. 6 ♂ ad.	No. 7 ♂ ad.	No. 8. ♀ ad.	No. 9 ♀ juv.
Total length.....	2083	2057	2210	2172	1930	1499
Tail.....	152.4	152.4	152.4	152.4	177.8	114.3
Height at shoulder.....	1321	1270	1346	1397	1245	991
Hind limb to hip.....	1295	1334	1245	1359	1145	965
Length of hind foot.....	610	635	635	597	597	522
Fore leg to elbow.....	597	584	610	646	521	432
Width of chest.....	326	326	368	368	305	229
Depth of chest.....	775	787	787	749	711	610
Ear ² from crown.....	....	....	140	140	....	....
" " notch.....	....	....	115	120	....	....

Skull.—In addition to its large size, the skull of *R. montanus* is peculiar in the unusual elongation of its facial portion. The antlers are similar in length and proportions to those of the Barren Ground Caribou, but more massive, with the palmated portions much broader and heavier. (For measurements see p. 153.)

Of the six specimens collected by Mr. Stone in the Cassiar Mountains, four are adult males, one is an adult female, and the other a young-of-the-year female. The female and three of the males agree very closely in coloration; the other male, apparently the oldest of the series, is much paler-colored throughout.

¹ Collector's numbers. No. 6 = Mus. No. 15714; No. 8 = Mus. No. 15715; No. 9 = Mus. No. 15716. The original measurements, given in inches, are here reduced to millimetres.

² Measurements from dry skins, exclusive of hair.

COMPARATIVE MEASUREMENTS OF SKULLS OF *Rangifer osborni* AND
R. montanus.

	<i>R. osborni</i> .		<i>R. montanus</i> .			
	15714 ♂ ad.	15715 ♀ ad.	17971 ♂ ad.	17972 ♂ ad.	17974 ♀ ad.	17973 ♀ ad.
Basal length.....	420	360	430	420	360	355
Tip of premaxilla to tip of nasals.....	125	100	121	120	97	101
Tip of premaxilla to al- veolus of first premolar.	148	126	142	137	115	115
Length of nasals.....	123	122	142	122	129	107
Greatest orbital breadth..	182	156	180	172	160	155
Breadth (above m ²).....	127	113	122	120	102	108
Zygomatic breadth.....	148	136	148	157	134	131
Mastoid breadth.....	149	116	146	147	120	113
Palatal breadth at m ...	73	62	72	61	60	55
Depth of skull between antlers.....	112	86	101	94	88	81
Length of upper tooth- row (crown surface)...	99	97	100	101	96	93
Diastema (canine to pm ¹)	72	59	72	71	65	62
Distance between antlers just below burr.....	78	53	64	75	68	75
Distance between outer edge of antlers just be- low burr.....	135	95	139	137	116	102
Length of mandible, inci- sive border to angle...	330	280	310	310	270	275
Angle to condyle.....	109	102	115	105	95	87
" " tip of coronoid..	148	137	155	144	127	127
Depth of mandible at m ₂ .	38	31	40	39	34	31
Length of lower toothrow.	103	103	105	110	99	101
Diastema.....	130	108	121	115	99	101
Antlers, length of main beam.....	1235	405	810	745	370	290
" distance apart at point of palma- tion.....	875	146	470	320	190	150
" distance between tips.....	790	—	393	450	—	—
" distance between points at tip of main beam....	415	100	360	270	235	300

This form of Caribou differs markedly in color from the Woodland Caribou in being very much darker throughout, in

its larger size, longer and heavier antlers, and in the large size of the white rump patch. This patch, measured across the base of the tail, has a breadth of 250 mm., but is divided through the middle by the dark band, 50 mm. wide, that



Fig. 3. *Rangifer montanus*, ♂ ad., No. 17971, Gold Range Mountains, B. C. $\frac{1}{4}$ nat. size.

passes down the tail, the white patch being thus separated into two areas, each with a transverse width of 100 mm.

The relationship of *R. osborni* to *R. montanus* is considered below.

In this connection it is due Mr. Madison Grant to state that

about a year ago he expressed his conviction to me that the Caribou from the Cassiar Mountains, referred provisionally

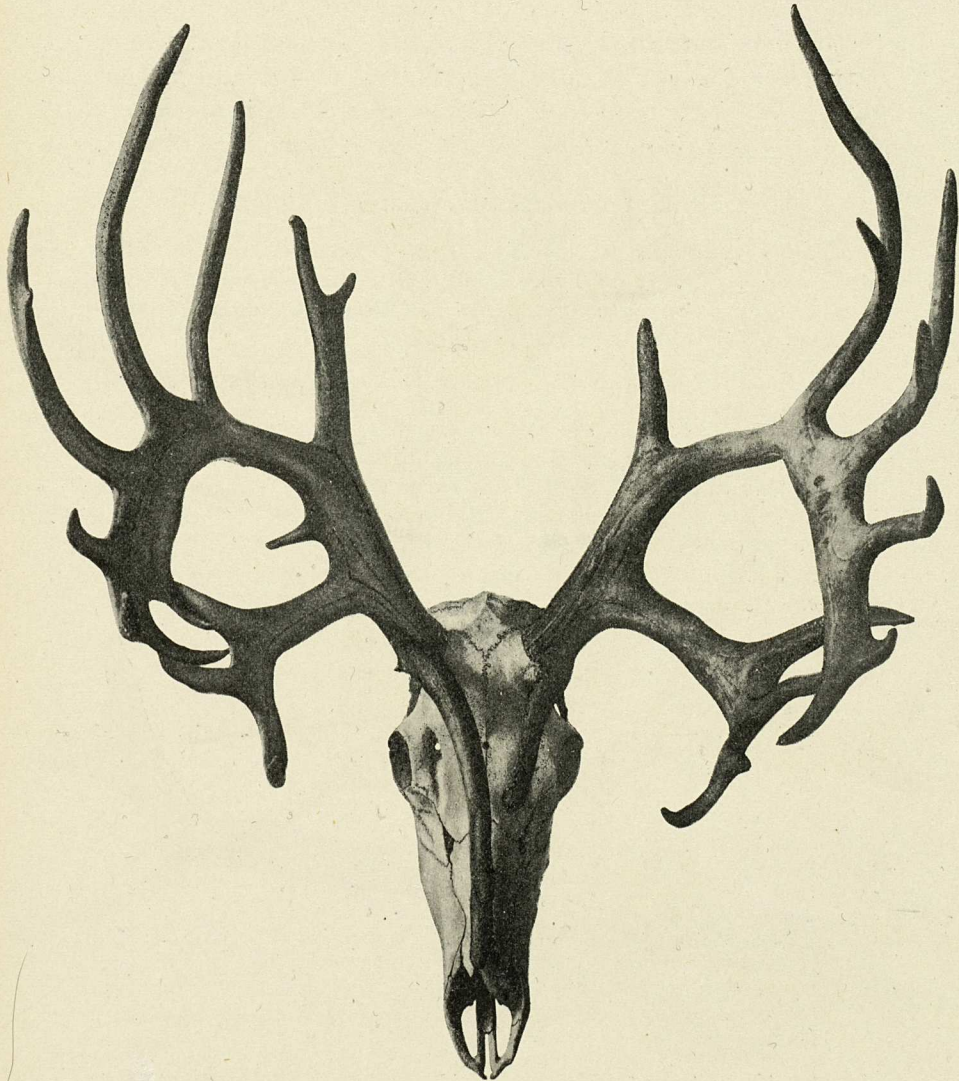


Fig. 4. *Rangifer montanus*. Same specimen as Fig. 3. $\frac{1}{2}$ nat. size.

to *R. montanus*, would prove to be different from true *R. montanus* of the Selkirk Range, and it is through his instigation and valued assistance that the four Selkirk specimens

described below have been obtained for the Museum. They were procured through Mr. T. E. Wilson of Banff Hot Springs, Alberta.

The Cassiar form is named for my colleague, Prof. Henry F. Osborn, Curator of the Department of Vertebrate Palæontology, in recognition of his cordial assistance in obtaining funds to equip and maintain the Andrew J. Stone Expeditions.

***Rangifer montanus* Seton-Thompson.**

Rangifer montanus SETON-THOMPSON, Ottawa Naturalist, XIII, No. 5, Aug., 1899, 129. Type locality, Selkirk Range, near Revelstoke, B. C. Type, mounted specimen, Museum Canadian Geological Survey, Ottawa, Canada.

Mr. Seton described the type of *Rangifer montanus* as follows:

"The general colour is a deep umber brown, very glossy, and darkening nearly to black on the lower parts of the legs. The neck is dull greyish white, also the underside, the buttocks, lips and belly. Along the ribs on each side is a greyish patch a little lighter than the surrounding brown. The white fringe above each hoof is shining white and *very narrow*."

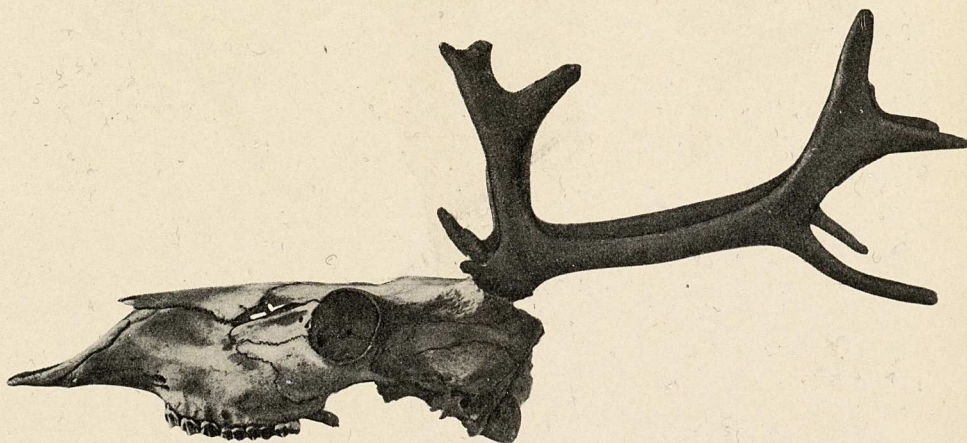


Fig. 5. *Rangifer montanus*, ♀ ad., No. 17973, Gold Range Mountains, B. C. About $\frac{1}{2}$ nat. size.

The date of capture is given as 1889, the month or season not being stated. The specimens now described were killed the last week in September, and are apparently very much

darker than the males, especially on the neck and shoulders, but have the grayish white areas of the males replaced by nearly pure white.

Rangifer montanus, in late September pelage, may be described in general terms as a *black* Caribou, with the neck and shoulders, especially in the males, much lighter than the body and limbs; while *R. osborni*, in corresponding pelage, is a *brown* Caribou, with much more white on the rump and posterior ventral surface, and the whole neck and shoulders, as well as the back and limbs, much lighter than in *R. montanus*.

The specimens of *R. montanus* are without measurements, but the species is apparently about the same size as *R. osborni*, as shown by the measurements of the skull given above.

In addition to the marked contrast in color, there are striking differences in the size and form of the antlers in the two forms, the antlers of *R. montanus* being of the typical Woodland Caribou type, and in their relative shortness and much branched character recall strongly the antlers of *R. terrænovæ*, but they are much lighter and more slender than in that species. They have the same abrupt upward curvature of the main beam, in contrast with the much longer and heavier and more depressed backward-sweeping main beam seen in *R. osborni*.

The nearest known relative of *R. osborni* is *R. stonei* from the Kenai Peninsula, which, however, is a differently colored animal, with the rostral portion of the skull much shorter and broader, and other important cranial differences. The antlers also differ greatly in the two species, the antlers of *R. stonei* more resembling those of the Barren Ground and Greenland species.